We claim:-

1. An antifoam and/or deaerator based on an oil-in-water dispersion whose oil phase contains at least one hydrophobic compound and an aqueous phase containing at least one stabilizer, water and, if required, a thickener, wherein the oil-in-water dispersion contains a combination of

(i) at least one polyglyceryl ester which is obtainable by at least 20% esterification of polyglycerol with a carboxylic acid of 12 to 36 carbon atoms
and
(ii) at least one bisamide of ethylenediamine and carboxylic acids of 10 to 36 carbon atoms.

2. An antifoam and/or deaerator as claimed in claim 1, wherein the hydrophobic compound is selected from the group consisting of the alcohols of at least 12 carbon atoms, alkoxylated fatty alcohols, mono-, di- and triglycerides of fatty acids, fatty acid esters of carboxylic acids of at least 12 carbon atoms and monohydric to tetrahydric alcohols of 1 to 24 carbon atoms, hydrocarbons having a boiling point above 200°C, fatty acids of 12 to 26 carbon atoms, 3-thiaalkan-1-ols, 3-thiaoxoalkan-1-ols, 3-thiadioxoalkanols and esters of the thiaalkane compounds.

3. An antifoam and/or deaerator as claimed in claim 1, wherein the hydrophobic compound is selected from the group consisting of the alcohols of at least 12 carbon atoms, alkoxylated fatty alcohols, mono-, di- and triglycerides of fatty acids, fatty acid esters of carboxylic acids of at least 12 carbon atoms and monohydric to trihydric alcohols of 3 to 22 carbon atoms, hydrocarbons having a boiling point above 200°C, fatty acids of 12 to 22 carbon atoms, 3-thiaalkan-1-ols, 3-thiaoxoalkan-1-ols, 3-thiadioxoalkanols and esters of the thiaalkane compounds.

4. An antifoam and/or deaerator as claimed in any of claims 1 to 3, wherein the weight ratio of (i) polyglyceryl esters to (ii) bisamides is from 10 : 1 to 1 : 10.

5. An antifoam and/or deaerator as claimed in any of claims 1 to 3, wherein the weight ratio (i) polyglyceryl esters to (ii) bisamides is from 3 : 1 to 1.5 : 1.

6. An antifoam and/or deaerator as claimed in any of claims 1 to 5, wherein the oil phase contains at least one fatty alcohol having 12 to 26 carbon atoms in the molecule, at least one glyceryl ester of fatty acids of 12 to 26 carbon atoms and at least one mineral oil.

7. An antifoam and/or deaerator as claimed in any of claims 1 to 6, wherein the amount of the hydrophobic phase of the oil phase in the composition of the oil-in-water dispersion is from 5 to 60% by weight and the amount of the aqueous phase is from 95 to 40% by weight.

8. An antifoam and/or deaerator as claimed in any of claims 1 to 7, wherein the oil-in-water dispersion contains from 0.1 to 50% by weight of at least one polyglyceryl ester.

9. An antifoam and/or deaerator as claimed in any of claims 1 to 8, which contains ethylenebisstearamide as bisamide (ii).

10. The use of a mixture of

(i) at least one polyglyceryl ester which is obtainable by at least 20% esterification of polyglycerol with a carboxylic acid of 12 to 36 carbon atoms
and
(ii) at least one bisamide of ethylenediamine and carboxylic acids of 10 to 36 carbon atoms

as an additive for antifoams and/or deaerators based on oil-in-water dispersions.

11. The use of an antifoam and/or deaerator as claimed in any of claims 1 to 9 for foam control of aqueous media which tend to form foam, in particular for foam control in pulp cooking, pulp washing, the beating of paper stock, papermaking and the dispersing of pigments for papermaking.

Antifoams and/or deaerators for aqueous media which tend to form foam

Abstract

Antifoams and/or deaerators based on oil-in-water dispersions, whose oil phase contains at least one compound from the group consisting of the alcohols of at least 12 carbon atoms, alkoxylated fatty alcohols, mono-, di- and triglycerides of fatty acids, fatty acid esters of carboxylic acids of at least 12 carbon atoms and monohydric to tetrahydric alcohols of 1 to 24 carbon atoms, hydrocarbons having a boiling point above 200°C, fatty acids of 12 to 26 carbon atoms, 3-thiaalkan-1-ols, 3-thiaoxoalkan-1-ols, 3-thiadioxoalkanols and esters of thiaalkane compounds in combination with

(i) at least one polyglyceryl ester which is obtainable by at least 20% esterification of polyglycerol with a carboxylic acid of 12 to 36 carbon atoms
and
(ii) at least one bisamide of ethylenediamine and carboxylic acids of 10 to 36 carbon atoms

and whose aqueous phase contains at least one stabilizer, water and, if required, a thickener, for aqueous media which tend to form foam, are used for foam control of aqueous media which tend to form foam, in particular for foam control in pulp cooking, pulp washing, the beating of paper stock, papermaking and the dispersing of pigments for papermaking.